

REMARKS:

In the outstanding Office Action, the Examiner allowed claims 17, 18, 21 and 22, objected to claims 9-16 and rejected claims 1-3, 5-8, 19, 20 and 23-26. No new matter is presented. Thus, claims 1-26 are pending and under consideration. The rejections are traversed below.

REQUEST FOR EXAMINER INTERVIEW:

An Interview was set up with Examiner Motilewa A. Good-Johnson for March 13, 2006. However, Examiner Good-Johnson suddenly became unavailable and the Interview was cancelled.

Therefore, before the Examiner acts on this Amendment, it is respectfully requested that the Examiner contact Ms. Temnit Afework at 202-454-1551 to arrange an Examiner Interview.

ALLOWABLE SUBJECT MATTER:

In the outstanding Office Action, the Examiner objected to claims 9-16 and allowed claims 17, 18, 21 and 22 are allowed. The rejection of claim 1, upon which claims 9-16 depend, is traversed below.

Therefore, claims 9-16, 17, 18, 21 and 22 should be allowable.

REJECTION UNDER 35 U.S.C. §103(a):

Claims 1-3, 5-8, 19, 20 and 23-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,972,314 (Getzinger) and U.S. Patent No. 5,684,807 (Bianchini).

The Examiner maintains the comparison of the Getzinger data flow signal processor architecture for implementing macro data flow or data stream control with the present invention. However, Getzinger relies on a centralized graph process controller to schedule and coordinate graph node activity. For example, as shown in FIG. 7, the graph process controller is provided to control functions including node, scheduling, node dispatching, start/stop graph, etc., (see also, col. 32-68). Getzinger requires an external graph process controller (GPC) to schedule nodes for evaluation and no node in the graph is receiving data from other nodes. As such, there is no possible way that the Getzinger algorithm could handle the self-evaluating technique of the dependency node as taught in the present invention.

In contrast to the centralized graph process controller in Getzinger, the present invention uses a dependency graph that implements a distributed process. The present invention does not require a central location controlling its operation; instead, that operation is triggered solely by requests made on the destination nodes. Further, the decision of which algorithms to invoke according to the present invention is solely at the discretion of the individual node's evaluation process, not at all visible to the graph as a whole ("black box evaluation" which is core to the operation of the dependency graph).

The Examiner acknowledges that Getzinger does not disclose allowing the second dependency node to execute the algorithm and executing the algorithm as a part of an evaluation of the second dependency node to implement a graphics creation process, but relies on Bianchini as teaching the same. However, Getzinger relates to the field of signal processing and microcode controllers and Bianchini is in the unrelated field of network communications. Applicants respectfully submit it is unobvious for one ordinary skilled in the field of Getzinger to apply the skills and techniques from the field of Bianchini and vice versa.

Even assuming that the field of signal processing and microcode controllers of Getzinger is analogous to the field of network communication in Bianchini, as set forth below the combination of Getzinger and Bianchini does not teach or suggest the features of the present invention.

Bianchini, at col. 2, lines 25-29, to which the Examiner refers, clearly indicates that when executing an algorithm within each node, it communicates with the other nodes for information (see also, col. 3, line 65 through col. 4, line 14). This is not the same as evaluation of an algorithm which does not belong to the node, but which is passed to it from another node (see, for example, claim 1 of the present application). In particular, the evaluation in the dependency graph operates independently based only on the data/algorithm given.

The adaptive DSD algorithm specified by Bianchini has several major differences from the present invention that make them distinguishable. First, the testing algorithms are completely contained within each node and are not passed through the connection as taught by the present invention. Second, the Adaptive DSD algorithm is an external controlling process, as the graph process controller and scheduler in Getzinger, which is itself an algorithm that significantly restricts the method of evaluation of a graph node.

For example, the evaluation of nodes via the method of the present invention could involve chains of algorithms being passed through the network, creating a situation where node_N

in a chain is using the algorithms passed from node₂, node₆, and node_{N-2}. The adaptive DSD evaluation of Bianchini insists that one node causes another to run its test, with no other nodes being involved in any given stage of the process (see, col. 6, lines 6-15). Finally, the algorithms being run by Bianchini to do the diagnoses are fixed, and not allowed to change during evaluation as allowed in the present invention (see, col. 6, lines 30-48).

The present invention not only causes a second node to evaluate the dependency graph of a graphics creation process but also provides the algorithm, which it is to evaluate along with the data to use in the evaluation, and a method of accessing the data in order to alter the evaluation.

Independent claims 1, 19, 20 and 24 recite an apparatus and method “to implement a graphics creation process”. The implementation of the graphics creation process includes, “passing a pointer to an algorithm associated with a first dependency node to a second dependency node” and “executing the algorithm as part of an evaluation of the second node” (“nodes”, “algorithms” and “pointers” in claim 20).

Independent claim 23 also recites executing an algorithm associated with a first “via the second node as part of an evaluation of the second node” and “reexecuting the algorithm via the second node each time input data of the second node changes to implement a graphics creation process”. Independent claim 19 also recites executing the algorithm as part of evaluation of the second node “each time input data of the second node changes”.

Independent claims 25 and 26 recite “a method of evaluating a dependency graph” including “passing a pointer to algorithm associated with a first dependency node to a second dependency node” and “calling the algorithm via the second dependency node and executing the algorithm as part of an evaluation of the second dependency node each time input data changes” (claim 25), where “the first algorithm is embedded in the second dependency node and executed as part of an evaluation of the second dependency node” (claim 26).

It is submitted that the independent claims 1, 19, 20 and 23-26 are patentable over Getzinger and Bianchini.

For at least the above-discussed reasons, the dependent claims depending from the independent claims are patentably distinct from the combination of Getzinger and Bianchini. The dependent claims also recite additional patentably distinguishing features. For example, claim 7 recites, “the algorithm parameter types are identified dynamically as the dependency

graph is executed." Getzinger and Bianchini, alone or in combination, do not teach or suggest, these features of claim 7.

Therefore, withdrawal of the rejection is respectfully requested.

REQUEST FOR WITHDRAWAL OF FINALITY OF THE OFFICE ACTION:

In light of the above arguments, Applicants respectfully submit that the features recited in each of the independent claims are patentably distinguishable over Getzinger and Bianchini. Therefore, withdrawal of the finality of the Office Action is respectfully requested.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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By: Temnit Afework
Temnit Afework
Registration No. 58,202

1201 New York Ave, N.W., 7th Floor
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501